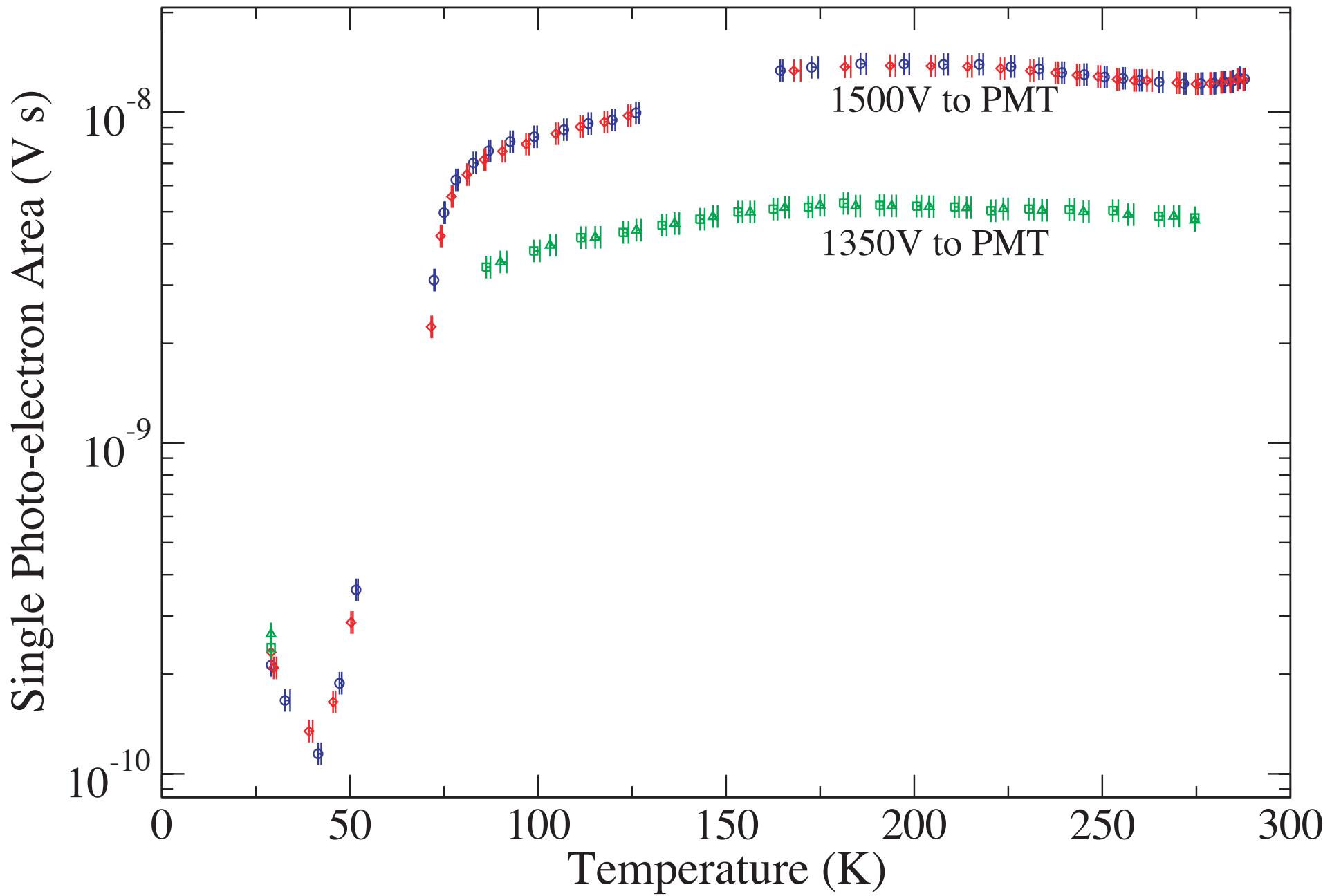


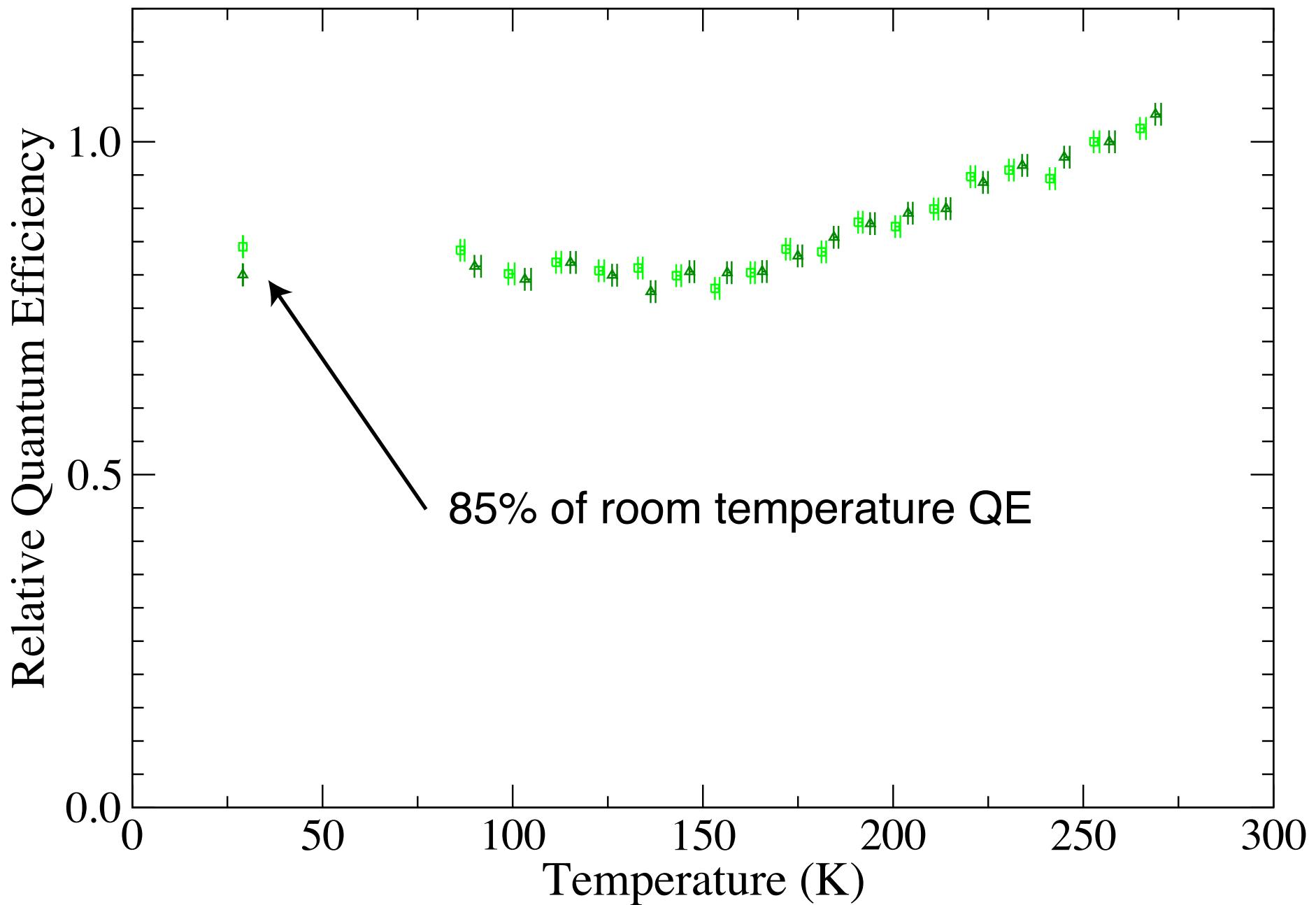
# PMT testing at LNe temperature



20 cm Hamamatsu PMT with metal underlayer on photocathode. Available with low radioactivity glass.

PMT testing rig allows controlled gas temperature, reproducible light levels for careful study of PMT gain, quantum efficiency.





# Micro-CLEAN



First cooldown beginning at Yale

Two 20-cm low background PMTs

4 kg active mass of LAr or LNe

PMTS are immersed in liquid

Goals:

- 1) Achieve  $> 3 \text{ pe/keV}$  for nuclear recoils
- 2) Test PMTs in LAr, LNe
- 3) Test electronics (from Boston U)
- 4) Test discrimination down to 10 keV